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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,174	01/18/2002	Thomas E. Shirley	29250/CE08633R	4545

29978	7590	12/22/2004	EXAMINER

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ART UNIT	PAPER NUMBER
2122	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/054,174	SHIRLEY ET AL.
	Examiner	Art Unit	
	John J Romano	2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/18/2002, 9/02/2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☒ Claim(s) *16 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *9/02/2003* .

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims **1-21** are pending in this action.

Claim Objections

2.   Claims **16** and **18** are objected to because of the following informalities: omission of word or typographical error.

3.   In regard to claim **16**, on line 10, it appears that the word "of" is omitted between "performance a". For the purposes of this action the examiner interpreted the word "of" to be in the claim as described above. Appropriate correction is required.

4.   In regard to claim **18**, on line 18, it appears that the word "of" is omitted between "performance a". For the purposes of this action the examiner interpreted the word "of" to be in the claim as described above. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims **1, 2, 6, 7, 10-13** and **15 - 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson et al., US 5,410,703 (hereinafter **Nilsson**) in

view of applicants admission of prior art, (hereinafter **APA**, see background art,

pages 1-4).

In regard to claim **1**, **Nilsson** discloses:

- "*A component of a communications network capable of*

  maintaining service interoperability during a software

  replacement, the component comprising: a plurality of devices,

  each device comprising: a processor coupled to the

  communications network; a memory coupled to the

  processor...", (E.g., see Figure 11 & Column 19, lines 55 - 62),

  wherein it is inherent that a network comprises a plurality of

  devices, each device having a processor and memory coupled

  to the network.

- "*...at least one first set of instructions stored in the memory and*

  adapted to cause the processor to perform a logically de-

  centralized processing function; at least one second set of

  instructions stored in the memory and adapted to cause the

  processor to request the performance of one of the logically de-

  centralized processing functions by one of the first set of

  instructions stored in the memory of one of the devices; and a

  third set of instructions stored in the memory and adapted to

  cause the processor to bind the second set of instructions

  requesting the performance of the logically de-centralized

  processing function to the one of the first set of instructions...",

(E.g., see Figure 5, 7 & Column 13, lines 18 - 27), wherein

Figure 5 shows that a caller or client, the second set of

instructions, requests software or first set of instructions, and is

directed by the Call ID via a pointer or a third set of instructions.

- "...*an internal network coupled to the plurality of devices and*

  adapted to facilitate the communication of data between the

  devices...", (E.g., see Figure 11 & Column 19, lines 36 - 54),

  wherein the definition of a network is two or more computers

  linked together with a communication link.

- "...*wherein during a software replacement the first and second*

  sets of instructions of a first subset of the devices operate under

  a first software version and the first and second sets of

  instructions of the devices not in the first subset of devices

  operate under a second software version...", (E.g., see Figure 5

  & Column 3, lines 50 - 60), wherein TEST and NORMAL are

  two different subsets operating under two different versions of

  software.

- "...*wherein the third set of instructions of the first subset of*

  devices cause the processors of the first subset of devices to

  bind the second sets of instructions requesting logically de-

  centralized processing functions to first sets of instructions of

  the devices in the first subset of devices; and wherein the third

  set of instructions of the devices not in the first subset of

devices cause the processors of the devices not in the first

subset of devices to bind the second sets of instructions

requesting logically de-centralized processing functions to first

sets of instructions of the devices not in the first subset of

devices." , (E.g., see Figure 7 & Column 14, lines 28 - 36),

wherein the third set of instructions, the trader, is a set of

instructions which inherently causes the processor to bind the

class template, second set of instructions with the appropriate

software, or first set of instructions.

Nilsson does not expressly disclose a rolling conversion. However, at the

time the invention was made, it would have been obvious to a person of ordinary

skill in the art to continue to map the different versions of software via the trader,

as disclosed by **Nilsson**, in a rolling conversion as disclosed in the background

section by the **APA**, (Page 2, lines 23-29). The motivation to do so would have

been to avoid a period of downtime in a telecommunications network, which can

be very expensive, (**Nilsson**, Column 3, lines 20 – 24).

6.   In regard to claim **6**, the rejection of base claim **1** is incorporated as

described above, as claim **6** is a product version of the system of claim **1**. But

Nilsson does not expressly disclose "…and one of the plurality of devices of the

component via the internal network…". However, it is deemed obvious as a

design choice to include other devices in the registry as the local domain.

Therefore, at the time the invention was made, it would have been obvious to a

person of ordinary skill in the art to include other devices in the registry in each

device as opposed to the registry only including the immediate processor and a central location. The motivation to do so would have been because it would be efficient to have only one copy of the data among common platforms as is commonly employed in network systems.

7.   In regard to claims **2** and **7** the rejections of base claims **1** and **6** are incorporated, respectively, as described above. Furthermore, **Nilsson** discloses:

> - "*... one fourth set of instructions* stored in the memory and adapted to caused the processor to perform a logically *centralized processing function and the at least one second set of instructions stored in the memory further adapted to cause the processor to request the performance of one of the logically centralized processing functions by one of the fourth set of instructions stored in the memory of one of the devices, and wherein during the software replacement the third set of instructions of the devices cause the processors of the devices to bind the second sets of instructions requesting logically centralized processing functions to fourth sets of instructions of the devices.*" , (E.g., see Figure 11 & Column 18, lines 55 - 68).

Nillson does not expressly disclose centralized processing functions. But at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include a fourth set of instructions to include "centralized services" in a telecommunications network as also disclosed in the background section by the **APA**, (Page 3, lines 15-23 The motivation to do so

would have been to reap the efficiency benefits of a network system including time and money.

8.   In regard to claim **10**, claim **10** is a method version of the product of claim **6**. Thus, the rejection of base claim **6** is incorporated as described above. But **Nilsson** does not expressly disclose "...implementing a clustered architecture...". However, the **APA** discloses:

-   "...implementing a clustered architecture..." (E.g., see page 1, lines 28-30).

Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement a clustered architecture. The motivation to do so is that "...a clustered architecture facilitates transitions", as also disclosed by the **APA** in the background section, (see page 1, line 26).

9.   In regard to claim **11**, the rejection of base claim **10** is incorporated as described above. But **Nilsson** does not expressly disclose "...*repeating the installing and configuring steps until the new release of software is installed on all the devices.*" However, the applicant discloses:

-   "...*repeating the installing and configuring steps until the new release of software is installed on all the devices.*", (E.g., see page 2, lines 23-29), wherein the process is referred to by the applicant as a rolling conversion.

Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement a rolling conversion with **Nilsson's** method to maintain service. The motivation to do so would have been because

"...it would be highly useful within the telecommunications industry to be able to test and change software during actual operation of the telecommunications switch without disrupting ongoing telecommunications traffic through the system.", (E.g., see **Nilsson**, Column 3, lines 25 - 29).

10.   In regard to claim **12**, the rejection of base claim **10** is incorporated as described above. But **Nilsson** does not expressly disclose "...*the installing step comprises installing the new release of software on one-half of the devices.*" However, the applicant discloses:

- "...*the installing step comprises installing the new release of software on one-half of the devices.*" (E.g., see page 2, lines 16-22), wherein, the applicant discloses a split-mode conversion.

Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement a split-mode conversion with **Nilsson's** method to maintain service The motivation to do so would have been because "...it would be highly useful within the telecommunications industry to be able to test and change software during actual operation of the telecommunications switch without disrupting ongoing telecommunications traffic through the system.", (E.g., see **Nilsson**, Column 3, lines 25 - 29).

11.   In regard to claim **13**, the rejection of base claim **10** is incorporated as described above.

12.   In regard to claim **15**, the rejections, of base claim **10** and claim **2**, are incorporated as described above.

13.   In regard to claim **16**, claim **16** is a method version of the product claim **6**;

thus, the rejections of claim **6** are incorporated as described above.

14.   In regard to claim **17**, the rejections of base claim **16** are incorporated.

Furthermore, the rejections of claim **6** are incorporated as described above.

Furthermore, Nilsson discloses:

- "...the request being issued by an application of a device not in

  the first subset of devices...", (E.g., see Figure 6 & Column 13,

  lines 37 - 56), wherein it is obvious in a network architecture that

  the request to the trader could be issued from any device

  included in the network .

Therefore, at the time the invention was made, it would have been obvious to

a person of ordinary skill in the art to combine multiple devices with the trader

interface. The motivation to do so would have been to include a network in the

"telecommunications system", (**Nisson**, page 4, line 59).

15.   In regard to claim **18**, claim **18** is a method version of the product claim **7**;

thus, the rejections of claim **7** are incorporated as described above. Additionally,

it is inherent that the global service which performs the logically centralized

processing function requested by the application is determined if the requested

function is to be performed by the global service. Furthermore, if the application

requesting the service is bound to the service it is inherent that the service will be

performed by the global service in order to make the system productive and

efficient. This is obvious as the purpose of this method is to "...change software

during actual operation of the telecommunications switch without disrupting

ongoing telecommunications traffic through the system.", (E.g., see **Nilsson**,

Column 3, lines 25 - 29).

16.   Claims **3, 4, 8** and **9** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Nilsson** in view of **APA**, as applied in claims 1 and 6 above,

and further in view of Saboff et al., US 6,185,734 B1 (hereinafter **Saboff**).

17.   In regard to claim **3**, the rejection of base claim **1** is incorporated as

described above. But, the combination of **Nilsson** and **APA,** do not expressly

disclose a third software version. However **Saboff** discloses:

- "...*operate under a third software version*...", (E.g., see Figure 4

    & Column 5, lines 22 - 44), wherein three software versions are

    used in the same system.

At least, **Nilsson** and **Saboff** are analogous art as they are both

concerned with the same field of endeavor, namely a registry database for

managing more than one version of software on the same system.   Therefore, at

the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to combine a third version of software with **Nilsson's**

invention of maintaining service interoperability while replacing software. The

motivation to do so would have been because "...it would be highly useful within

the telecommunications industry to be able to test and change software during

actual operation of the telecommunications switch without disrupting ongoing

telecommunications traffic through the system.", (E.g., see **Nilsson**, Column 3,

lines 25 - 29).

18.　　In regard to claims **4** and **8** the rejection of base claims **1** and **6** are

incorporated as described above.　But the combination of **Nilsson** and **APA** do

not expressly disclose a registry database.　However, **Saboff** further discloses:

> - "... *a registry database for storing information relating to the first*
>
>   *sets of instructions stored in the memories of the devices, and*
>
>   *wherein the third set of instructions stored in the memories of*
>
>   *the devices are adapted to cause the processor to determine*
>
>   *the one of the first set of instructions to which to bind the second*
>
>   *set of instructions requesting the performance of the logically*
>
>   *de-centralized processing function based on information stored*
>
>   *in the registry database.*", (E.g., see Figure 4, 5 & Column 5,
>
>   lines 22 - 44), wherein the application is the client or second set
>
>   of instructions, requesting the appropriate version of software
>
>   or first set of instructions, and the registry is the database or
>
>   third set of instructions, which causes the binding based on the
>
>   rules stored in the registry database.

　　　　　Therefore, at the time the invention was made, it would have been obvious

to a person of ordinary skill in the art to combine a registry database with

Nilsson's invention of maintaining service interoperability while replacing

software.　The motivation to do so would have been because a registry is

"...easy to manage due to its centralized nature" as taught by Saboff, (E.g., see

Figure 5 & Column 3, lines 2-3).

19.   In regard to claim **9**, the rejection of base claim **6**, and claim **8** are

incorporated as described above.

20.   Claim **5, 14, 19, 20** and **21** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Nilsson** in view of **APA**, as applied in claims **1**, **10** and **16**

above, and further in view of **Saboff** and further in view of obviousness.

21.   In regard to claim **5**, the rejection of base claim **1** and claim **4** is

incorporated as described above. But, at least, **Nilsson** does not expressly

disclose "...*wherein each of the devices further comprises a registry database*

stored in the memory...". However, it would become apparent to one skilled in

the pertinent art at the time the invention was made to include a registry in each

device as opposed to one registry in a central location. The motivation to do so

would have been because it is efficient to have the interface at the client level in

order to use local data as well as global data.

22.   In regard to claim **14**, the rejections of base claim **10** and claim **5** are

incorporated as described above. But, at least, **Nilsson** does not expressly

disclose "...a name service...". However, **Saboff** further discloses:

-    "...a name service..." (E.g., see Figure 4 & Column 5, lines 22 -

        44), wherein multiple versions of software are managed via a

        hierarchical registry and rules which are interpreted as the name

        service.

Therefore, at the time the invention was made, it would have been obvious

to a person of ordinary skill in the art to combine a name service with **Nilsson's**

invention of maintaining service interoperability while replacing software. The

motivation to do so would have been because a naming service would enable

one to manage multiple versions of a software library resulting in efficient, time-

saving execution as taught by Saboff, (E.g., see Figure 3, 4 & Column 5, lines

15-25).

23.   In regard to claim **19**, the rejection of base claim **16** is incorporated.

Furthermore the rejections of claims **4** and **8** are incorporated as well. Thus, the

corresponding limitations of claim **19** are met as argued in the above claims.

24.   In regard to claim **20**, the rejection of base claim **16** is incorporated.

Furthermore the rejections of claims **5** and **14** are incorporated. Thus, the

corresponding limitations of claim **20** are met as argued in the above claims.

25.   In regard to claim **21**, the rejections of base claim **16** and claim **14** are

incorporated as described above.

26.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure:

- Muraca	US 2002/0055917 A1
- Shanbhogue	US 2003/0105988 A1
- Mamatsu	US 6,687,901 B1
- Janis et al.	US 6,115,549
- Lundin et al.	US 5,339,430

27.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to John J Romano whose telephone number is

(571) 272-3872. The examiner can normally be reached on 8-5:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Tuan Q Dam can be reached on (571) 272-3695. The fax

phone number for the organization where this application or proceeding is

assigned is 703-872-9306.

Information regarding the status of an application may be obtained from

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free).

TUAN DAM
SUPERVISORY PATENT EXAMINER